UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/502,899	02/11/2000	Robert Bennett Stout JR.	ADDS:017/KRE	5856

7590 12/05/2001

Hugh R.Kress
Winstead Sechrest & Minick P.C.
910 Travis,
Suite 2400
Houston, TX 77002

EXAMINER	
SHAPIRO, JEFFERY A	
ART UNIT	PAPER NUMBER
3651	

DATE MAILED: 12/05/2001

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/502,899	Applicant(s) STOUT ET AL.	
	Examiner Jeffrey A. Shapiro	Art Unit 3651	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *10 September 2001* .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3-21 and 23-50* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3-21 and 23-50* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Response to Amendment

1. Claims 2 and 22 are cancelled based upon the last two lines of paragraph 1 under "Remarks" on p. 6 of the response dated 9/10/01.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 4, 6, 7, 10-12, 17-19, 22, 24, 26, 27, 30-32, and 37-39, as understood, are rejected under 35 U.S.C. 102(b) as being anticipated by Zinsmeyer US 5,163,586. Zinsmeyer '586 discloses the fuel additive dispensing system as follows.

As described in Claims 1 and 21;

1. a housing adapted to be affixed to a fuel dispenser having a fuel dispensing hose (note that fuel dispenser (1) has a housing);

2. a hydraulic module, disposed at least partially within said housing having a fluid input adapted to be coupled to at least one source of fuel (25) additive and a fluid output flow (note fuel tanks 28-30) adapted to be coupled to said fuel dispensing hose (20-22) to introduce said additive into a stream of fuel delivered through said fuel dispensing hose;

3. control circuitry (2 and 4), coupled to said hydraulic module, for generating electrical control signals applied to said hydraulic module to cause a controlled amount of said additive to be released from said at least one source to flow through said fluid input and fluid output and into said fuel dispensing hose.

4. said controlled amount of additive is determined based upon measurements of past performance of said hydraulic module (note that the amounts of additive can be changed easily by changing the mixing ratios in the control computer based on prior reported performance of a particular mixture of additives and fuels, for example);

As described in Claims 4 and 24;

6. said hydraulic module further comprises a flow meter (23 and 26) coupled to said control circuitry for monitoring the flow of additive through said hydraulic module;

As described in Claims 6 and 26;

7. said controlled amount of additive is released in at least one increment into said stream of fuel;

As described in Claims 7 and 27;

8. said controlled amount of additive is released each time a predetermined amount of fuel is delivered through said fuel dispensing hose;

As described in Claims 10 and 30;

9. said at least one source of fuel additive is external to said housing;

As described in Claims 11 and 31;

10. said controlled amount of said additive is an amount proportional to a total amount of fuel in said stream of fuel;

As described in Claims 12 and 32;

11. said controlled amount of said additive is an amount specified by a user of said fuel dispenser (note that the operator could be construed as a user of said fuel dispenser);

As described in Claims 17 and 37;

12. a user interface (3) coupled to said control circuitry, wherein said control circuitry is responsive to a selection signal generated by said control circuitry to initiate dispensation of said fuel additive (note that said fuel additive is automatically dispensed with the fuel as the fuel is requested);

As described in Claims 18 and 38;

13. said user interface is responsive to user interaction to generate said selection signal;

As described in Claims 19 and 39;

14. said user interface is responsive to said user interaction occurring prior to said stream of fuel being delivered through said fuel dispensing hose to generate said selection signal;

As described in Claims 41 and 46;

15. said control circuitry is adapted to be coupled to a retail point-of-sale system (see abstract) including a point-of-sale server for controlling a fuel dispensing transaction;

As described in Claim 42 and 47;

16. fuel and said fuel additive are dispensed in a single integrated transaction;

As described in Claims 43 and 48;

17. a predetermined amount of said additive is dispensed;

As described in Claims 44 and 49;

18. the amount of additive dispensed is proportional to the amount of said fuel dispensed;

As described in Claims 45 and 50;

19. said control circuitry is responsive to at least one signal from said retail point-of-sale system to disable said fuel additive dispensing system (see Claim 5);

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.

Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 3, 5, 8, 9, 16, 20, 23, 25, 28, 29 and 40, as understood, are rejected under 35 U.S.C. 103(a) as being unpatentable over Zinsmeyer '586 in view of Leatherman et al '629. Zinsmeyer '586 discloses the fuel additive dispensing system as described above. Zinsmeyer '586 further discloses the following.

As described in Claims 3 and 23;

1. said fluid input comprises an input flow control manifold and said fluid output comprises an output flow control manifold (note that it is inherent that said fuel dispenser (1) will have an input and output flow control manifold, as is widely known in the art);

As described in Claims 5 and 25;

2. said hydraulic module operates to dispense said additive with an accuracy of at least approximately 0.75%. (Note that this accuracy is well known to those ordinarily skilled in modern digital control art and well within the means of performance of typical computer control dispensing devices. See also Column 2, lines 18-24, note in particular that the device of Zinsmeyer has accuracy of 0.4%.)

As described in Claims 20 and 40;

3. said user interface is responsive to said user interaction occurring while said stream of fuel is being delivered through said fuel dispensing hose to generate said selection signal (note that although said user input does not occur during delivery of said stream of fuel, this is a functional

equivalent of responding to said user interaction before said stream of fuel is delivered, as is described in Claim 19)

Zinsmeyer '586 does not expressly disclose the following.

As described in Claims 8 and 28;

4. a graphic display viewable by a user of said fuel dispenser;

As described in Claims 9 and 29;

5. at least one user-actuable control for activating said dispensing system to dispense said fuel additive into said stream of fuel;

As described in Claims 16 and 36;

6. said graphic display is responsive to said control circuitry to display a plurality of separate images thereon;

Leatherman et al '629 discloses a graphics based, internet based fuel dispenser having the following.

As described in Claims 8 and 28;

7. a graphic display viewable by a user of said fuel dispenser (38);

As described in Claims 9 and 29;

8. at least one user-actuable control (40 and 32) for activating said dispensing system to dispense said fuel additive into said stream of fuel;

As described in Claims 16 and 36;

9. said graphic display (38) is responsive to said control circuitry to display a plurality of separate images thereon;

Both Zinsmeyer '586 and Leatherman et al '629 are analogous art as they are both fuel dispensers having computer based control systems.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to have integrated the computer based, internet based, graphics interface system of Leatherman et al '629 with the fuel dispenser of Zinsmeyer '586.

The suggestion/motivation for doing so would have been to improve customer and user interface with the system. See abstract of Leatherman et al '629 and note Zinsmeyer '586 is a fuel dispenser inherently used at a point of sale (a gas station) with routine access to customers.

Therefore, it would have been obvious to combine Zinsmeyer '586 with Leatherman et al '629 to obtain the invention as specified in Claims 3, 5, 8, 9, 16, 20, 23, 25, 28, 29 and 40.

Claims 13-15 and 33-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zinsmeyer '586 in view of Leatherman et al '629 and further in view of Comer et al.

Zinsmeyer '586 and Leatherman et al '629 disclose the fuel dispenser as described above. Zinsmeyer '586 and Leatherman et al '629 do not expressly disclose the following.

As described in Claims 13 and 33;

10. a proximity detector, coupled to said control circuitry, for detecting the presence of a person in the vicinity of said system;

As described in Claims 14 and 34;

11. said proximity detector applies a detection signal to said control circuitry upon detection of a person in the vicinity of said system;

As described in Claims 15 and 35;

12. said control circuitry is responsive to said detection signal to display at least one predetermined image on said graphic display;

Comer et al discloses a fuel dispenser having the following.

As described in Claims 13 and 33;

13. a proximity detector (75), coupled to said control circuitry, for detecting the presence of a person in the vicinity of said system;

As described in Claims 14 and 34;

14. said proximity detector (75) applies a detection signal to said control circuitry upon detection of a person in the vicinity of said system;

Regarding Claims 15 and 35, note that it would be expedient for one ordinarily skilled in the art to cause a predetermined image as disclosed in Leatherman et al '629 to be displayed based upon the detection of a customer at the fuel dispenser.

Zinsmeyer '586, Leatherman et al '629, and Comer et al are all analogous art as they all pertain to fuel dispensers.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to have used a proximity detector such as that used by Comer et al in the device of Zinsmeyer '586.

The suggestion/motivation for doing so would have been to detect the presence of a customer. See abstract of Comer et al.

Therefore, it would have been obvious to combine Comer et al with Zinsmeyer '586 and Leatherman et al '629 to obtain the invention as specified in Claims 3, 5, 8, 9, 16, 20, 23, 25, 28, 29 and 40.

Response to Arguments

6. Applicant's arguments filed 9/10/01 have been fully considered but they are not persuasive. Applicant's assert that the phrase "past performance" is to be taken literally as including all of the elements measured and data referred to in the specification at p.15, lines 2-12. Nonetheless, the broad limitation of Claims 2 and 22, whether placed in independent Claim 1 may be construed several ways under the plain meaning of this phrase. Meriam-Webster's Collegiate Dictionary, 10th ed., on p. 850 defines the word "**past**" as "**having existed or taken place before the present**". The same dictionary, on p. 863, defines "**performance**" as "**the manner in which a mechanism performs**" or "**the manner of reacting to stimuli**". The hydraulic module of Applicant consists of various elements which correspond to similar elements found in Zinsmeyer '586, as outlined above. Based on these meanings, it can be construed that the exit of the fluid at the nozzle (38) of Zinsmeyer '586 observed by a person could be used as "feedback" to the device for adjustments to the hydraulic module of Zinsmeyer. This is not necessarily, as Applicants' assert, measuring performance based upon the *vehicle* being filled any more than Applicants' apparatus, which also expels fuel into a vehicle. The amount of fuel with or without additives coming out of the nozzle is a function of the

action of the hydraulic module itself. Therefore, measurement and observation of the fuel flow out of the nozzle is a direct indication of the performance of the hydraulic module at a particular point in time. For example, in the extreme, one could hold a bucket which holds one gallon of fluid up to the nozzle, capture the fluid while timing how long the bucket fills, and then use such information in fine-tuning the future performance of the hydraulic module.

Even if the driver of information for feedback to the control system of the hydraulic module was the actual successive performance in the form of vehicle requirements at the pump. As much as this information reflects the fluid flow of fuel and additive together or separately, note also that based upon the ratios of additive to fuel one could discern the amount of additive to fuel in a back-calculation method). This successive performance information used as feedback to said feedback control system controlling said hydraulic module also reads on the claims as *currently written*.

In addition, past performance could be construed to comprise certain time intervals. These time intervals could be very small, such as in the millionths of a second. The control system of Zinsmeyer necessarily feeds back information and data on sensed variables. Note col. 4, lines 8-22 discuss sending such information to a control computer. Note also that valve (36) is controlled by dispensing computer (5). Further, the apparatus of Zinsmeyer does control the amount of additive dispensed, contrary to Applicants' assertions. See col. 1, lines 67 and 68 and col. 3, lines 1-28. Note in particular col. 3, lines 31-35 which indicates that the controller is "capable of controlling multiple additive blender pumping systems." Blender pumping systems

controlled by a central controller are construed as controlling the amount of additive dispensed. The controller inherently adjusts based on feedback, which at the very least, inherently comprises past performance information. Even if the ratio of additive to fuel is preset, the nature of feedback information and feedback control systems inherently requires sensing of fuel and additive flows and adjustment of said flows to correspond with said preset ratio.

The dispensing computer (5) dispenses additives based on "pressuring and measuring units" (26). These elements appear to be part of the "hydraulic module" of the Zinsmeyer apparatus. As the measuring units inherently feedback information to the dispensing computer, within certain time intervals, said information a certain amount of time intervals old, it can be construed that the Zinsmeyer hydraulic module controls additive amounts "based upon measurements of past performance of said hydraulic module".

Regarding "the housing adapted to be affixed to a fuel dispenser having a fuel dispensing hose", note that the device of Zinsmeyer has a hydraulic module as part of a fuel additive dispensing system which is housed in a housing which can be clearly seen in figures 1-3. The housing is, at the very least, inherently adapted to be affixed to the fuel dispenser and includes the additive dispensing system. These elements are again construed to meet the limitations described in independent Claims 1 and 21. Even if one construes the housing of Zinsmeyer to contain more components than the hydraulic module, the module remains inside the housing. Said housing, at the very least, is capable of being adapted to be affixed to another fuel dispenser by affixing the housing

next to another like housing and fastening it to either the like housing or at the base shown in figures 1-3. For example, fuel dispensers are often times placed side to side or back to back, and is well known in the art. Also, note in lines 20-28 of p.13 of Applicants' specification indicates that the components of said hydraulic module may be physically separated and located in various locations throughout the fuel dispenser and that the term "hydraulic module" is "soley for the purposes of ease of collective reference" and that the term hydraulic module can be construed as "any arrangement of the various hydraulic control elements necessary for performing the flow control functions described herein".

Regarding the 35 USC Sec. 103 rejection, Zinsmeyer discloses an accuracy of 0.4% which is well within the accuracy of 0.75% described in Claims 5 and 25. At the very least, it would have been obvious to one of ordinary skill in the art to have maintained the 0.4% accuracy to this or less than this percentage throughout the system in order to maintain the weights and measures regulations. If the additive is added at an accuracy of higher than 0.4%, there is a certain risk that even in light of the final blended ratio, the combined accuracy could be affected. In other words, if one combines one liquid at a 0.5% accuracy and another at 0.45 % accuracy, if each fluid volume makes up half of the mixture (50%), then the resulting accuracy could then be at 0.475%, which is over the mandated 0.4% accuracy. Col. 2, lines 28-37 describes that the apparatus of Zinsmeyer includes "facility for metering the additive volumes dispensed with the metered fuel volumes..." Applicants, on lines 24-27 of p. 12 of the specification, state that "one embodiment is comprised of one or more sets of inlet flow

control manifolds (124), upstream and downstream, respectively of a positive displacement flow meter (134)." In light of the teaching of Zinsmeyer, it nonetheless would still be obvious to one of ordinary skill in the art to maintain the accuracy of the system downstream or upstream of the hydraulic module and throughout the system to maintain the accuracy of the product being expelled at the nozzle.

Therefore, it remains, as described above, that Zinsmeyer, Leatherman et al and Comer et al may be construed to apply to the Claims 1-50.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Seymour, Kamihira et al, Nicholas et al, Huellinghorst et al, Corso, Leech et al, Terranova et al (US 5,954,089) and (US 6,112,134), Miller, Skupin et al, Skeirik, Someya et al, Nomura et al, Mathur et al, Bailey et al and Ghaem are all cited as examples of adaptive controllers.

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrey A. Shapiro whose telephone number is (703)308-3423. The examiner can normally be reached on 9:00 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christopher P. Ellis can be reached on (703)308-2560. The fax phone numbers for the organization where this application or proceeding is assigned are (703)308-0552 for regular communications and (703)308-0552 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-1113.

Jeffrey A. Shapiro
Patent Examiner,
Art Unit 3651

CHRISTOPHER P. ELLIS
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3600

December 2, 2001